Green Development Plan

Developer Name:

Project Name:

Address (Street/City/State):

Project Description

Description

Summary description of site and proposed development including location details and number & type of units: (note please expand reponse cell if necessary - typical for all templates)

Goals

Sustainability Goal/ Mission Statement:

Facilitator

Name	Address	Affiliation	Tel. No.	E-Mail
(To be chosen at the Kick-Off Meeting)				

Attachments

Graphics/drawings/photos
Additional minutes, etc.

Kick-off Meeting
Agenda

Developer Name:

Project Name:

Address (Street/City/State):

Agenda

Item	Responsible Party	Decision	Follow-up
Develop an agenda/schedule for Charrette/s.			
Decide on participants.			
Invite participants and track responses.			
Give presentation guidelines to the speakers.			
Decide on stakeholders			
Finalize budget, expenditures, and resources.			
Make logistical arrangements.			
Assemble and distribute participant and resource material.			
Develop evaluation forms.			

Source: Lindsay,Todd, Hayter 2003: Handbook for Planning and Conducting Charrettes for High Performance Projects, Golden CO: NREL

Kick-off Meeting
Meeting/Charrette Participants

Developer Name:

Project Name:

Address (Street/City/State):

Recommended participant

Participants

Level	Possible Participants	Role	Pre-Meeting	Planning Meeting	Charrette	Name	Affiliation	Tel. No.	E-Mail
Level 1: Core Group	Facilitator	Work with PM and architect to set up initial goal setting charrettes. Facilitates charrettes. Can act as a "green champion".							
	Developer/Owner	Hire motivated & experienced team. Communicate project vision & goals.							
	Project Manager	Work with the client to kickstart the project and coordinate the team							
	Asset & Property Manager	Work with design team to note all building assets and property requirements.							
	Building Operations/Maintenance	Work with design team to note all building o/m requirements and needs.							
	Banking representative/funder	Work with the design team to help them understand economic climate, fiscal impacts and financial benefits.							
	Architect	Ensure that other consultants are part of early consultations especially on building form & programming							
	Site Planner	Considers sustainable site, neighborhood, regional, planning, smart growth and urban design issues.							
	Civil Engineer (with expertise in water and wastewater systems)	Provide input into site-specific opportunities regarding water conservation, reuse and treatment							

Kick-off Meeting
Meeting/Charrette Participants

Developer Name:

Project Name:

Address (Street/City/State):

Recommended participant

Participants

Level	Possible Participants	Role	Pre-Meeting	Planning Meeting	Charrette	Name	Affiliation	Tel. No.	E-Mail
	Structural Engineer	Consider impact of structural choices on form & massing							
Level 1 Core Group (cont)	Mechanical Engineer	With expertise in energy analysis and simulation. Provide feedback on impact of massing & orientation on mechanical systems and energy performance. Work with the design team to find climate-specific opportunities & features that could assist the building operation.Help the team consider new options.							
	General Contractor or Construction Manager	Depending on procurement process, engage in the project as early as possible to provide a perspective and discussion around how to get things done as well as what will be done. Help design team to understand constructability issues associated with site & specific program requirements.							
	Cost Consultant (with green design expertise)	Assist team to set realistic budget, bearing in mind current market conditions							
	Green Material and Specifications Expertise	Bring broad knowledge of green methods and materials to the table.							
	Community Representatives	Work with the design team to ensure that concerns & opportunities are heard.							

Kick-off Meeting
Meeting/Charrette Participants

Developer Name:

Project Name:

Address (Street/City/State):

Recommended participant

Participants

Level	Possible Participants	Role	Pre-Meeting	Planning Meeting	Charrette	Name	Affiliation	Tel. No.	E-Mail
Level 2: Specialists	Surveyor	Provide input into site-specific opportunities or concerns with systems and technologies that the design team may consider.							
	Marketing Expert	Work with the design team to help them understand local market conditions.							
	Interior Designer /Materials Consultants	Consider the impact of the program & project goals on material & finish choices.							
	Electrical Engineer	Provide feedback on impact of massing & orientation on electrical systems & lighting/daylighting options.							
	Lighting or Daylighting Specialist	Help the team to understand impact of orientation & massing choices on daylight & lighting design.							
	Landscape Architect	Provide input into site-specific opportunities relating to habitat preservation or restoration, indigenous plantings, green roofs etc.							
	Planning / Regulatory Approvals Agencies Representatives	Work with the design team to help them meet the intent of the codes while working to decrease the project's impact on local infrastructure.							

Kick-off Meeting
Meeting/Charrette Participants

Developer Name:
Project Name:
Address (Street/City/State):

Recommended participant

Participants

Level	Possible Participants	Role	Pre-Meeting	Planning Meeting	Charrette	Name	Affiliation	Tel. No.	E-Mail
Level 3: Whole System Specialists (in projects w/ significant land development)	Ecologist	Work with the design team to find natural opportunities & features that could impact or be impacted by the building.Help the team consider new options: for example, even dense urban contexts have roofs, atria and ground plane connections that would benefit from an ecologist.							
	Geohydrologist	Provide input into site-specific opportunities or concerns with geological and water systems and technologies that the design team may consider.							
	Restoration Biologist	Provide input into site-specific opportunities or concerns with agriculture/horticulture systems and technologies that the design team may consider.							
	Social Historian	Provide input into site-specific/local history that the design team may consider.							
	Soils or Geotechnical Engineer	Provide input into site-specific opportunities or concerns with geological and earth systems and technologies that the design team may consider.							

Source: Busby Perkins+Will, Stantech, 2007: Roadmap for the Integrated Design Design, BC Green Building Roundtable
Market Transformation to Sustainability, 2007: Integrated Delivery Process for Sustainability

Kick-off Meeting
Preparation

Developer Name:

Project Name:

Address (Street/City/State):

Stakeholder Involvement Plan

Stakeholder Category	Stakeholder	Contact	Issues	Winning Strategy	Outreach Strategy
Sectors of Society	People adjacent to project				
	Neighborhood Residents				
	Landowners				
	Renters				
	Users				
	Business Owners				
Resource and Special Interest Groups	Funders				
	Financial Institutions				
	Environmental Groups				
	Industrial Organizations				
	Religious Organizations				
	Civic Groups				
	Social Groups				
	Labor Groups				
Agencies	Special Districts				
	School Districts				
	Planning Commission Members				
	Local Government				
	Council of Government				
	State Agencies				
	Federal Agencies				
Elected Officials	City & County Councilors				
	Mayors				
	School Board Members				
	State Representatives & Senators				

Source: Margerum, Richard, 2006: Stakeholder Identification in APA Planning & Urban Design Standards

Green Development Plan
Green Charrette
Preparation: Logistics

Developer Name:

Project Name:

Address (Street/City/State):

Checklist

Possible Items	Responsible Party	Decision	Follow-up
Confirm the client's intentions, sustainable design objectives, organizational and decision-making structure and values, constraints, and risk tolerance with respect to green building possibilities			
Confirm base data and who will be providing it (see templates B-3 and B-4)			
Energy performance targets and recommended performance path			
Distribution of Green Communities Criteria Technical Manual to Full Development Team and Stakeholders			
Formulation of Agenda/Schedule			
Confirm type and length of the charrette			
Define products to result from the charrette			
Confirm location for the charrette			
Confirm date of the charrette			
Define resources needed to help cover or defray costs of the charrette			
Invite participants to the charrette			
Invite speakers to provide desired motivation & education during the charrette			
Confirm facilitators to lead the charrette and breakout groups			
Provide project information for charrette participants			
Date, time, and logistics of the any interim meetings, conference calls, etc.			

Green Charrette
Preparation: Data

Developer Name:
Project Name:
Address (Street/City/State):

CE -civil engineer
SE -struct engineer
ME -mech engineer
EE -electrical engineer

Useful Data for Informed Decision Making Process

General Area	Specific Area	Subcategory (if applicable)	Usual Provider	Actual Provider
Environmental and regulatory information	Site condition data:	Soils report	CE, SE, architect, owner	
		Topography	CE, architect	
		Local stormwater management regulations and data	SE, architect, owner	
		Percolation tests to determine if on-site stormwater management is feasible	CE	
	Local microclimate data:	Sun path diagrams	architect	
		Prevailing wind direction and speeds for average year and days in four seasons	architect, ME, EE	
		Average daily temperature profile for four seasons	architect, ME, or EE	
		Design temperatures	ME, EE, owner	
		Shading profiles of site and surrounding topography, trees and buildings	architect	
		Surface condition albedos (level of reflected light) and temperatures	CE, ME	
		Features of concern – trees, streams, archaeological	architect, landscape arch	
	Local regulatory issues for potable water conservation: grey-water use, rainwater collection, on-site sewage treatment	Need for environmental assessment	CE, ME	
	Hydrology	Drainage flows; stream, lake, estuary, coastline, and wetland locations; stream volumes; lake and tide levels; floodplains and flood-hazard areas; chemical/bacteriological water-quality characteristics; water supply systems; sewage treatment systems.	CE, landscape arch, geohydrologist	
	Environmental protection regulations	Applicable stream and habitat regulations	architect, specialist green design consultants	
Design team general knowledge	Capital and life cycle costs of desired components and systems		architect, specialist green design consultants	
	Potable water conservation:	Greywater collection and use	architect, landscape arch, ME	
		Rainwater collection and use	architect, landscape archt, ME	
		Xeriscaping	architect, landscape arch	
	Stormwater management	Best practices	architect, ME, landscape arch	
	Indoor air pollution by interior finish materials and cleaning products		architect, ME	

Green Charrette
Preparation: Data

Developer Name:

Project Name:

Address (Street/City/State):

CE -civil engineer
SE -struct engineer
ME -mech engineer
EE -electrical engineer

Useful Data for Informed Decision Making Process

General Area	Specific Area	Subcategory (if applicable)	Usual Provider	Actual Provider
	Daylighting, solar control, and natural ventilation design considerations		architect, ME, EE, SE	
Urban Planning	Community	Demography	site planner, owner	
		Previous Planning History	site planner, owner	
		Political environment	site planner, owner	
	Regulations and Ownership	Zoning and Land Use	site planner	
		Design Guidelines	site planner, architect	
	Property Ownership	Ownership data	site planner, owner	
	Continuity of a Place	History	site planner, owner	
		Patterns of Development	site planner, owner	
	Character	Urban Form	site planner	
		Views	site planner	
		Open Space	site planner	
		Activity Nodes	site planner	
		Architectural Character	site planner, architect	
		Streetscape	site planner, architect	
		Environmental Concerns	site planner, owner	
	Connections	Street Network and Rights-of-Way	site planner, owner	
		Traffic Parking and Collision Data	site planner, owner	
		Transit Modes and Services	site planner, owner	
		Bicycles and Pedestrians	site planner, owner	
		Utilities and Services	site planner, CE	
	Economic and Market Setting	Economic and Market data	site planner, owner	

sources: Green Buildings BC :Guide to Value Analysis and the Integrated Design Process
Frederick Steiner, University of Austin, Texas in APA Planning and Urban Design Standards
Daniel Schellinger, Sharon Priest, SMWM, San Francisco, CA in APA Planning and Urban Design Standards

Green Charrette
Activity

Tips for Facilitators

Tip / Tool	Description	Purpose
Check-ins	Participants introduce themselves, give personal anecdote, or state goal for meeting	Personalize setting, get on same page, break ice, and set context
Check-outs	Participants comment on their experiences	Chance to express concluding remarks and achieve sense of closure
Ice-breakers	Game or activity	Introductions, ease people into group setting, and stimulate discussion
Team values or Code of Conduct	Establish team's ground rules with input from all participants	Create common understanding, promote a respectful environment, and provide a means to prevent or resolve disputes
Brainstorming	Technique for generating ideas in low-risk environment	Generate new ideas, stimulate creative and lateral thinking, get input from everyone
Parking lot	List to track issues that arise but are off-topic	Keeps discussion focused without forgetting important issues
Mirroring	Facilitator repeats what a participant has said verbatim	Ensures that people are heard, builds trust, can speed up brainstorming
Paraphrasing	Facilitator repeats what a participant has said in his/her own words	Ensures that people feel heard and understood, can clarify meaning
Multi-modal learning	Use of different styles of learning and participation, including visual, auditory and written	Reflects participants' different learning styles, maximizing learning and input
Positions versus interests	Facilitator may be able to draw out underlying motives beneath a participant's position (iceberg analogy)	Highlights common ground between positions that appear conflicting or polarized
Go-around	Technique of 'going around the room' or table one-by-one to hear from everyone. Can continue until everyone has passed, indicating that they have nothing more to add	Ensures everyone has a chance to speak, preventing domination of discussion; participants can listen effectively knowing that they will have a turn to speak
Negative poll	Ask for a show of hands to determine who disagrees with a statement	Can allow for fast decision-making and consensus-building
Open-ended questions	Broad questions typically beginning with "how", "what", or "why"	Encourages participants to share their perspectives
Probing questions	Questions or statements such as "Can you give an example?" or "Could you elaborate on that?"	Encourages participants to provide more information
"Thumbo-meter"	Ask for thumbs up, down, or sideways to indicate levels of agreement	Quick way to get feedback from participants
Hot dots	A method of prioritizing using adhesive dots: participants are given a certain number of dots to place beside a certain number of choices	Used to get a sense of the group's collective priorities without making a final selection or decision

Source: Charles Holmes/Alex Wray of Wray Group in Busby Perkins+Will, Stantech, 2007: Roadmap for the Integrated Design Design, BC Green Building Roundtable

Green Development Plan
Primary Subject Areas

Developer Name:
Project Name:
Address

Criteria:
Mandatory
Optional

Development Option # _____			Discussion - to include consideration of all issues, including the following:						
Primary Subject Area	**Relating to Green Communities Criteria**		Champion *who will take the item forward?*	Strategies *what strategies should be employed?*	Integration *holistic relation-ship to other elements?*	Barriers *what barriers must be overcome?*	Level of Ease of Implement. *how easy to implement item?*	Level of Commitment *how important is this item to the project?*	Economic Viability *how costly is item to implement?*
Energy Issues	**2.4**	**Smart Site Location: Make Use of Passive Solar Heating/Cooling**							
	5.1a	**Efficient Energy Use: New Construction**							
	5.1b	**Efficient Energy Use: Moderate Rehab**							
	5.2	**Energy Star Appliances**							
	5.3a	**Efficient Light: Interior**							
	5.3b	**Efficient Light: Exterior**							
	5.4	**Electricity Meter**							
	5.5a	**Additional Reductions in Energy Use: New Construction**							
	5.5b	**Additional Reductions in Energy Use: Moderate Rehab**							
	5.6a	**Photovoltaic (PV) Panels**							
	5.6b	**Photovoltaic (PV) Ready**							
Water Issues	**3.4**	**Surface Water Management**							
	3.5	**Storm Drain Labels**							
	4.1a	**Water Conserving Fixtures: New Construction**							
	4.1b	**Water Conserving Fixtures: Mod Rehab**							
	4.2	**Efficient Irrigation**							

Green Development Plan
Primary Subject Areas

Developer Name:
Project Name:
Address

Criteria:
Mandatory
Optional

Development Option # _____			Discussion - to include consideration of all issues, including the following:						
Primary Subject Area	**Relating to Green Communities Criteria**		Champion *who will take the item forward?*	Strategies *what strategies should be employed?*	Integration *holistic relation-ship to other elements?*	Barriers *what barriers must be overcome?*	Level of Ease of Implement. *how easy to implement item?*	Level of Commitment *how important is this item to the project?*	Economic Viability *how costly is item to implement?*
Building Operation Issues	**8.2**	**Occupant's Manual**							
	8.3	**Homeowner and New Resident Orientation**							
Durability Issues	**6.1**	**Construction Waste Management**							
	6.2	**Recycled Content Material**							
	6.3	**Certified, Salvaged and Engineered Wood**							
	7.10a	**Materials in Wet Areas: Surfaces**							
	7.10b	**Materials in Wet Areas: Tub and Shower Enclosure**							
	7.11a	**Basements and Concrete Slabs: Vapor Barrier**							
	7.11b	**Basements and Concrete Slabs – Radon: New Construction**							
	8.1	**Building Maintenance Manual for Owner**							

Green Development Plan
Primary Subject Areas

Developer Name:
Project Name:
Address

Criteria:
Mandatory
Optional

Development Option # _____			Discussion - to include consideration of all issues, including the following:						
Primary Subject Area	**Relating to Green Communities Criteria**		Champion *who will take the item forward?*	Strategies *what strategies should be employed?*	Integration *holistic relation-ship to other elements?*	Barriers *what barriers must be overcome?*	Level of Ease of Implement. *how easy to implement item?*	Level of Commitment *how important is this item to the project?*	Economic Viability *how costly is item to implement?*
Healthy Living Environment Issues	**7.1**	**Low / No VOC Paints & Primers**							
	7.2	**Low /No VOC Adhesives & Sealants**							
	7.3	**Formaldehyde-free Comp. Wd.**							
	7.4	**Green Label Certified Floor Covering**							
	7.5a	**Exhaust Fans – Bathroom: New Construction**							
	7.5b	**Exhaust Fans – Kitchen: New Construction**							
	7.6	**Ventilation: New Construction**							
	7.7	**HVAC Sizing**							
	7.8a	**Water Heaters: Mold Prevention**							
	7.9	**Cold Water Pipe Insulation**							
	7.10a	**Materials in Wet Areas: Surfaces**							
	7.10b	**Materials in Wet Areas: Tub and Shower Enclosure**							
	7.11a	**Basements and Concrete Slabs: Vapor Barrier**							
	7.11b	**Basements and Concrete Slabs – Radon: New Construction**							
	7.12	**Water Drainage**							
	7.13	**Garage Isolation**							
	7.14	**Clothes-Dryer Exhaust**							
	7.15	**Integrated Pest Management**							
	7.16	**Lead-Safe Work Practices**							

Green Development Plan
Green Communities Criteria
Mandatory Items

Developer Name:

Project Name:

Address

Development Option # _____			Areas of Consideration		
Max Pts.	Exp. Pts.	Green Communities Criteria	Champion *name* *role*	Strategies *how intend to meet*	Integration *relationship to water, energy, etc.*
Integrated Design Process					
Mandatory	1.1	**Green Development Plan**			
Location and Neighborhood Fabric					
Mandatory *except infill site or*	2.1a	**Smart Site Location: Proximity to Existing Development**			
Mandatory *except infill site or rehabs*	2.1b	**Smart Site Location: Protecting Environmental Resources**			
Mandatory *except infill site or*	2.1c	**Smart Site Location: Proximity to Services, New Construction**			
Mandatory	2.2	**Compact Development**			
Mandatory	2.3	**Walkable Neighborhoods: Sidewalks and Pathways**			
Environmental Remediation					
Mandatory	3.2	**Conduct a Phase I Environmental Site Assessment and provide a plan for abatement if necessary.**			
Mandatory	3.2	**Erosion and Sedimentation Control**			
Mandatory	3.3	**Landscaping**			
Water Conservation					
Mandatory	4.1a	**Water Conserving Fixtures: New Construction**			

Mandatory	**4.1b**	**Water Conserving Fixtures: Mod Rehab**			
Mandatory	**4.2**	**Efficient Irrigation**			
Energy Efficiency					
Mandatory	**5.1a**	**Efficient Energy Use: New Construction**			
Mandatory	**5.1b**	**Efficient Energy Use: Moderate Rehab**			
Mandatory	**5.2**	**Energy Star Appliances**			
Mandatory	**5.3a**	**Efficient Light: Interior**			
Mandatory	**5.3b**	**Efficient Light: Exterior**			
Mandatory	**5.4**	**Electricity Meter**			
Materials Beneficial to the Environment (all optional criteria)					
Healthy Living Environment					
Mandatory	**7.1**	**Low / No Volatile Organic Compounds (VOC) Paints and Primers**			
Mandatory	**7.2**	**Low / No VOC Adhesives and Sealants**			
Mandatory	**7.3**	**Formaldehyde-free Composite Wood**			
Mandatory *if floor*	**7.4**	**Green Label Certified Floor Covering**			
Mandatory *except for moderate*	**7.5a**	**Exhaust Fans – Bathroom: New Construction**			
Mandatory *except for*	**7.5b**	**Exhaust Fans – Kitchen: New Construction**			
Mandatory *except for*	**7.6**	**Ventilation: New Construction**			
Mandatory	**7.7**	**HVAC Sizing**			
Mandatory	**7.8a**	**Water Heaters: Mold Prevention**			
Mandatory	**7.9**	**Cold Water Pipe Insulation**			
Mandatory	**7.10a**	**Materials in Wet Areas: Surfaces**			

Mandatory	**7.10b**	**Materials in Wet Areas: Tub and Shower Enclosure**			
Mandatory *except for rehabs*	**7.11a**	**Basements and Concrete Slabs: Vapor Barrier**			
Mandatory	**7.11b**	**Basements and Concrete Slabs – Radon: New Construction**			
Mandatory	**7.12**	**Water Drainage**			
Mandatory	**7.13**	**Garage Isolation**			
Mandatory	**7.14**	**Clothes-Dryer Exhaust**			
Mandatory	**7.15**	**Integrated Pest Management**			
Mandatory	**7.16**	**Lead-Safe Work Practices**			
Operations and Maintenance					
Mandatory	**8.1**	**Building Maintenance Manual for Owner**			
Mandatory	**8.2**	**Occupant's Manual**			
Mandatory	**8.3**	**Homeowner and New Resident Orientation**			

Certification that all Green Communities© Criteria listed above have been satisfied:

Green specialist
Signature:
Name:
Title:
Tel. No.:
E-mail:
Accreditation:
Date:

Project Architect
Signature:
Name:
Title:
Tel. No.:
E-mail:
Accreditation:
Date:

Project Sponsor
Signature:
Name:
Title:
Tel. No.:
E-mail:
Date:

Green Development Plan
Green Communities Criteria
Optional Criteria

Developer Name:

Project Name:

Address

Development Option # _____				Areas of Consideration				Quantifiable Areas				
Max Pts.	Exp. Pts.	Criterion		Champion *name* *role*	Strategies *strategy 1* *strategy 2, etc.*	Intregration *relationship to water, energy, etc.*	Barriers *barrier 1* *barrier 2, etc.*	Level of Ease of Implement. *high 3* *medium 2* *low 1*	Level of Commitment *high 3* *medium 2* *low 1*	Economic Viability *high 3* *standard 2* *low 1*	Total Score *9 max* *3 min*	Criteria in project *Y/N*
Integrated Design Process (all mandatory criteria)												
Location and Neighborhood Fabric												
5		**2.4**	**Smart Site Location: Make Use of Passive Solar Heating/Cooling**									
10		**2.4b**	**Smart Site Location: Grayfield, Brownfield or Adaptive Reuse Site**									
5		**2.5**	**Compact Development**									
5		**2.6**	**Walkable Neighborhoods: Connections to Surrounding Neighborhoods**									
12		**2.7**	**Transportation Choices**									
Environmental Remediation												
5		**3.4**	**Surface Water Management**									
2		**3.5**	**Storm Drain Labels**									

Water Conservation (all mandatory criteria)												
Energy Efficiency												
10		**5.5a**	**Additional Reductions in Energy Use: New Construction**									
10		**5.5b**	**Additional Reductions in Energy Use: Moderate Rehab**									
15		**5.6a**	**Photovoltaic (PV) Panels**									
2		**5.6b**	**Photovoltaic (PV) Ready**									
Materials Beneficial to the Environment												
5		**6.1**	**Construction Waste Management**									
14		**6.2**	**Recycled Content Material**									
10		**6.3**	**Certified, Salvaged and Engineered Wood**									
5		**6.4a**	**Water-Permeable Walkways**									
10		**6.4b**	**Water-Permeable Parking Areas**									
5		**6.5a**	**Reduce Heat-Island Effect: Roofing**									
5		**6.5b**	**Reduce Heat-Island Effect**									

Healthy Living Environment												
2		**7.8b**	**Water Heaters: Minimizing CO**									
		7.11a	**Basements and Concrete Slabs: Vapor Barrier (rehabs)**									
5		**7.17a**	**Healthy Flooring Materials: Alternative Sources**									
2		**7.17 b**	**Healthy Flooring Materials: Reducing Dust**									
Operations and Maintenance (all mandatory criteria)												
134		**total**										

Certification that all Green Communities Criteria listed above have been satisfied:

Green specialist

Signature:
Name:
Title:
Tel. No.:
E-mail:
Accreditation:
Date:

Project Architect

Signature:
Name:
Title:
Tel. No.:
E-mail:
Accreditation:
Date:

Project Sponsor

Signature:
Name:
Title:
Tel. No.:
E-mail:
Date: